

PATENT SPECIFICATION

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(21) Application No. 39391/72 (22) Filed 24 Aug. 1972
(23) Complete Specification filed 21 Aug. 1973
(44) Complete Specification published 14 April 1976
(51) INT. CL.² F16B 2/12
(52) Index at acceptance
E2B 5A3

(72) Inventor ANTHONY VALENTINE



(54) IMPROVEMENTS IN OR RELATING TO CLAMPS

(71) We, BARBER & COLMAN LIMITED, a British Company of Brooklands, Sale, Cheshire, M33 1UL, do hereby declare the invention, for which we pray that a Patent 5 may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention relates to a clamp for use 10 in securing an air diffuser in a duct, and particularly for connecting an air diffuser of the type having an alignment keyway incorporated in the spigot portion of the diffuser mounting frame in order to obtain 15 hidden fixing. Such an air diffuser is hereinafter and in the claims referred to as "an air diffuser of the type aforesaid".

It is an object of the present invention 20 to provide a mounting clamp which facilitates the mounting of an air diffuser of the type aforesaid in e.g. a plenum box.

According to the present invention there 25 is provided a clamp for securing an air diffuser of the type aforesaid in a duct, the clamp comprising two relatively slidable L-shaped members with their corresponding limbs adjacent one another and a pair of said corresponding limbs being interconnected by a screw device while the 30 other pair are interengaged, and with the free end of the interengaged limb of one member having a formation for engaging in the diffuser keyway while the free end of the interengaged limb of the other member 35 is engageable in a mounting formation in the duct.

An embodiment of the present invention 40 will now be described, by way of example, with reference to the accompanying drawings, in which:—

Fig. 1 is a perspective view of an outer clamp member;

Fig. 2 is a perspective view of an inner bracket member;

Fig. 3 is a front view of the assembled

bracket and;

Fig. 4. is a side view of the assembled bracket showing its relationship to a plenum box and air diffuser.

The clamp consists of an inner clamp member 10 and an outer clamp member 11 both of which are of substantially inverted L-shape. The limb 12 of the inner clamp member 11 is provided with a nut 13 which is screw engaged by a screw 14 carried by the parallel limb 15 of the outer clamp member 11. The other end of the inner clamp member 10 is formed with a formation 16 for engagement in the alignment keyway 17 (see Fig. 4) incorporated 60 in the spigot portion 18 of the mounting frame 19 of the diffuser 20. The other end of the outer clamp member 11 is adapted to be received in a formation 21 of a plenum box 22 or other duct. 65

Each clamp member 10 and 11 is formed of sheet metal, and the clamp 10 passes through a slot 23 in the clamp 11 so that a part of the clamp 10 lies at the front and another part lies at the back of 70 clamp 11.

Normally at least two such clamps would be used to mount a diffuser 20 in a plenum box 22 or other duct, but for convenience sake only one is shown in Fig. 4. 75

Let us assume that the diffuser 20 is to be mounted in a suitably mounted plenum box 22 whereof the outer end 21 is hemmed. By being hemmed we simply mean that the outer edge of the plenum box is 80 inturned.

In use, the formation 16 of each inner bracket member 10 is located in the keyway 17 in the spigot portion 18 of the mounting frame 19 and is slid along the 85 keyway 17 to the desired position. With the clamp screw 14 slackened off to give maximum adjustment, the diffuser 20 and clamp assemblies are inserted into the plenum box 22 or other duct until the 90

WT 431 760

other end of the outer clamp member 11 engages in the hemmed portion 21 of the plenum box 22. At this stage the weight of the diffuser 20 is taken by the clamps. The 5 screws 14 are then tightened until the back of the diffuser flange 24 touches the plenum box 22 at which time the diffuser 20 is firmly secured in position in the plenum box 22 by the mounting clamps.

10 WHAT WE CLAIM IS: —

1. A clamp for securing an air diffuser of the type aforesaid in a duct, the clamp comprising two relatively slid able L-shaped members with their corresponding limbs 15 adjacent one another and a pair of said corresponding limbs being interconnected by a screw device while the other pair are

interengaged, and with the free end of the interengaged limb of one member having a formation for engaging in the diffuser key-way while the free end of the interengaged limb of the other member is engageable in a mounting formation in the duct. 20

2. A clamp as claimed in claim 1, in which one of the interengaged limbs passes 25 through a slot in the other so as partially to lie at each side of the latter.

3. A clamp for securing an air diffuser of the type aforesaid in a duct substantially as hereinbefore described with 30 reference to the accompanying drawing.

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Chartered Patent Agents,
Agents for the Applicants.

Printed for Her Majesty's Stationery Office by The Tweeddale Press Ltd., Berwick-upon-Tweed, 1976.
Published at the Patent Office, 25 Southampton Buildings, London WC2A 1AY, from which copies
may be obtained.

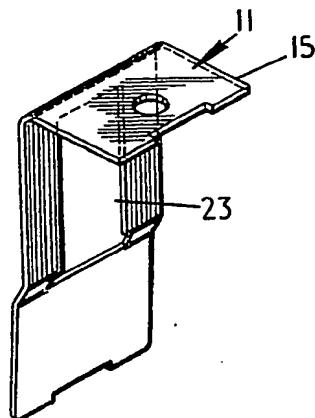


FIG. 1

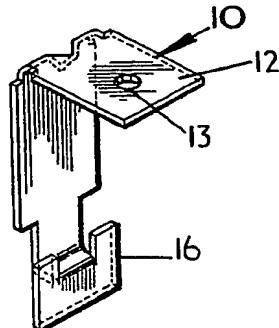


FIG. 2

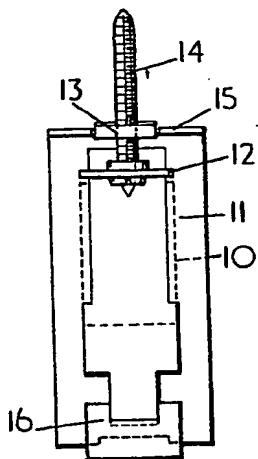


FIG. 3

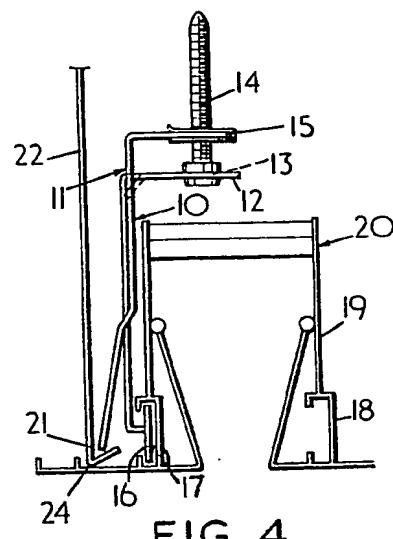


FIG. 4